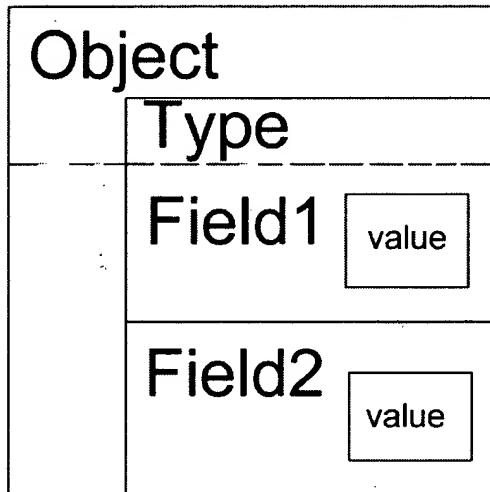


Object Oriented Runtime Comparison

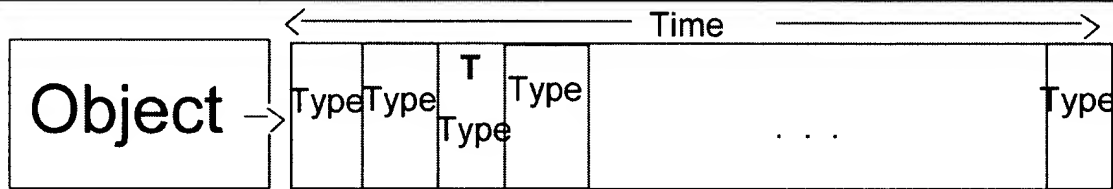


OOP

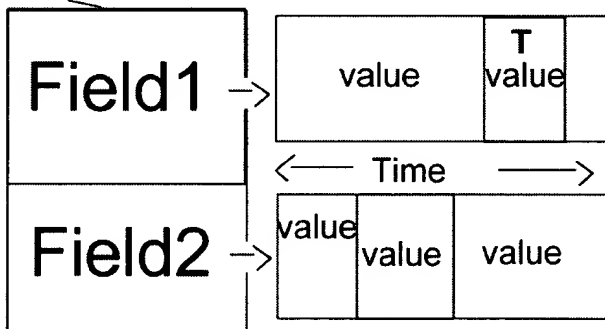
To evaluate Object.Field1:

- 1) Lookup static Type,
- 2) Lookup static Field1 location,
- 3) Retrieve value.

FIGURE 1



Temporal OOP



To evaluate Object.Field1:

- 1) Lookup Type at time T,
- 2) Lookup Field1 location,
- 3) Lookup value at time T,
- 4) Retrieve value.

FIGURE 2

GENERAL ERROR CONDITIONS

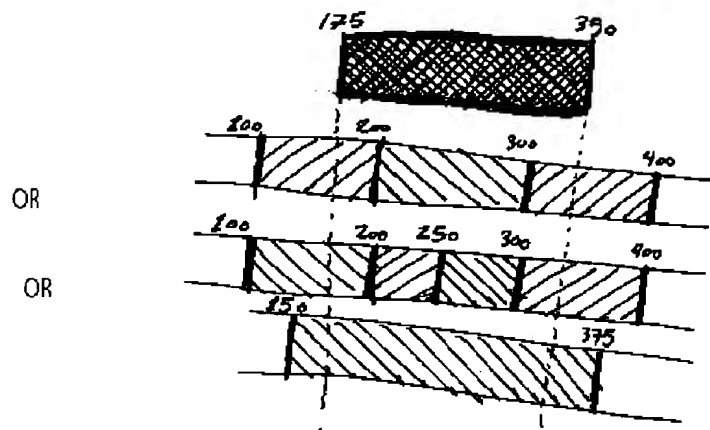


FIGURE 3

ADD_NEW_ATTRVAL_SHIFT (ONE END-POINT)

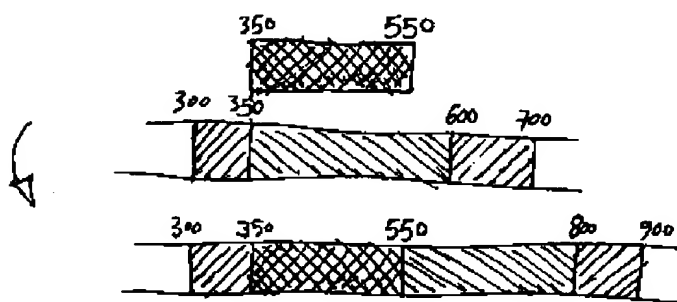


FIGURE 4

ADD_NEW_ATTRVAL_SHIFT (ONE END-POINT)

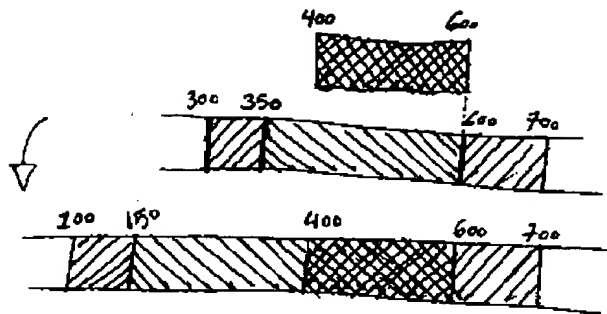


FIGURE 5

ADD_NEW_ATTRVAL_SHIFT (TWO END-POINTS)

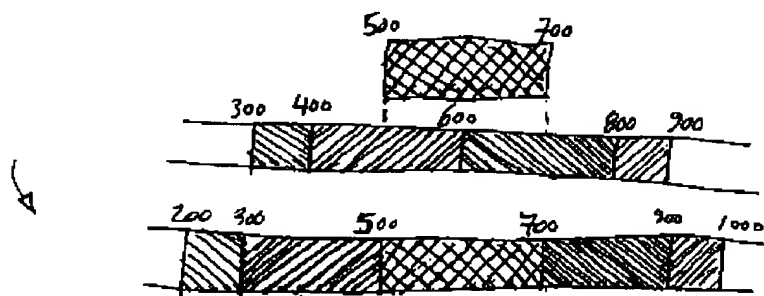


FIGURE 6

GENERAL ERROR CONDITIONS

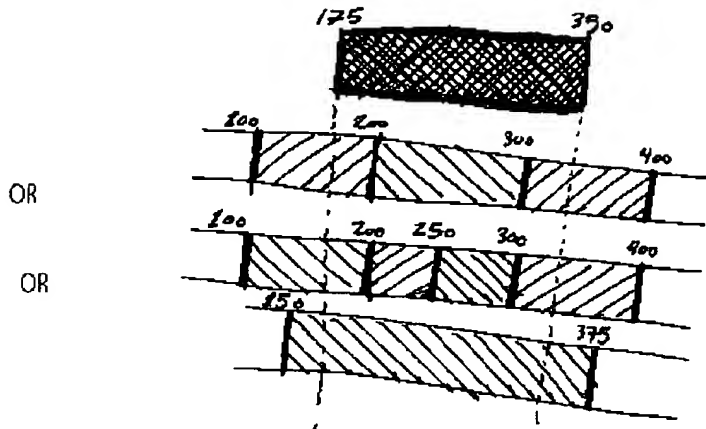


FIGURE 7

ADD_NEW_ATTRVAL_SQUEEZE (ONE END-POINT)

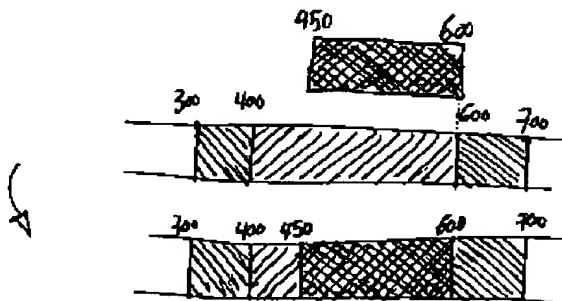


FIGURE 8

ADD_NEW_ATTRVAL_SQUEEZE (ONE END-POINT)

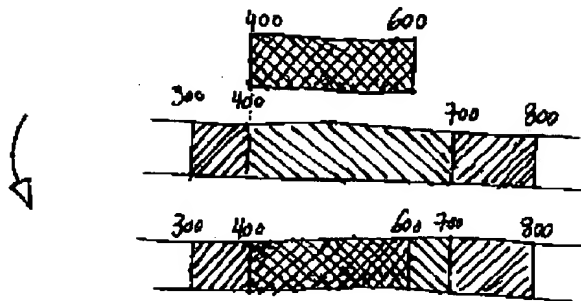


FIGURE 9

ADD_NEW_ATTRVAL_SQUEEZE (TWO END-POINTS)

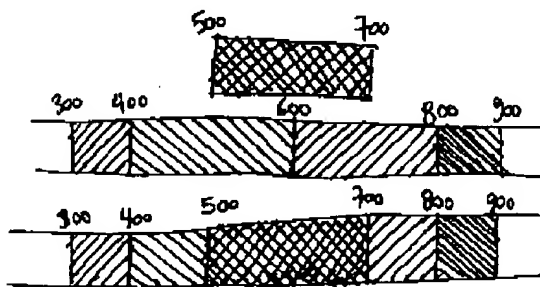
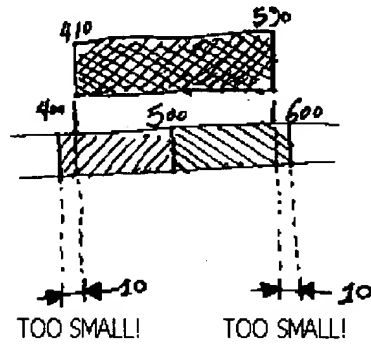


FIGURE 10

ERROR CONDITION - ADD_NEW_ATTRVAL_SQUEEZE



When MIN_ATTRVAL_SIZE == 20

FIGURE 11

FINAL_EDIT_ATTRVAL_SHIFT

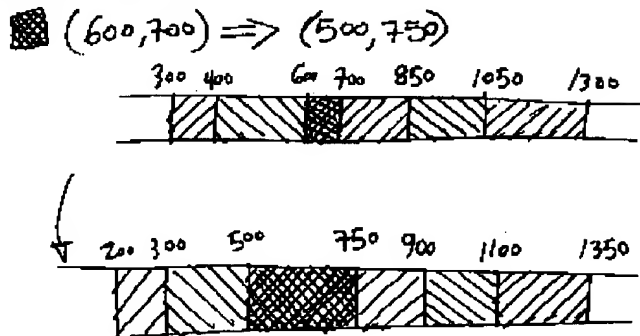


FIGURE 12

FINAL_EDIT_ATTRVAL_SQUEEZE

$$\boxed{\text{diagonal lines}} (600, 700) \Rightarrow (500, 800)$$

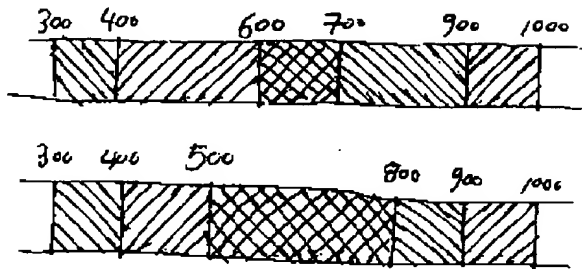
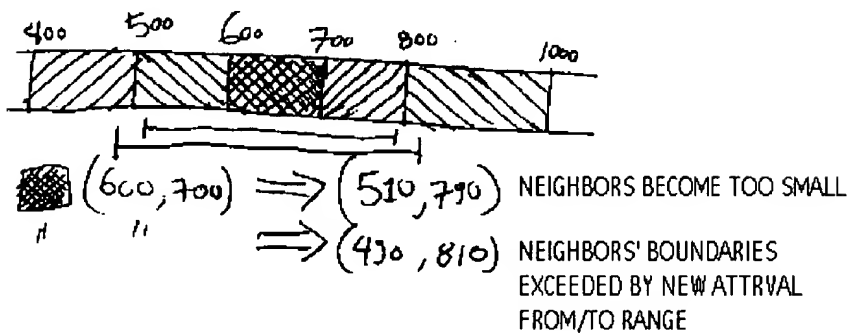


FIGURE 13

ERROR CONDITIONS - FINAL_EDIT_ATTRVAL_SQUEEZE



When MIN_ATTRVAL_SIZE == 20 (for example)

FIGURE 14

FINAL_REMOVE_ATTRVAL_SHIFT

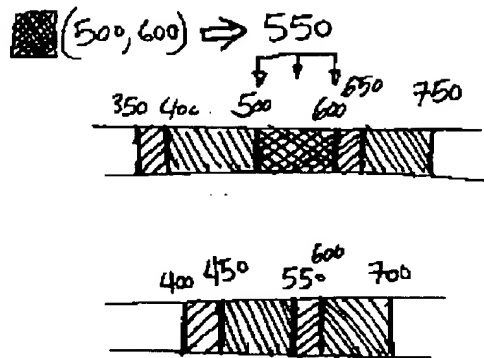


FIGURE 15

FINAL_REMOVE_ATTRVAL_LEAVE_GAP

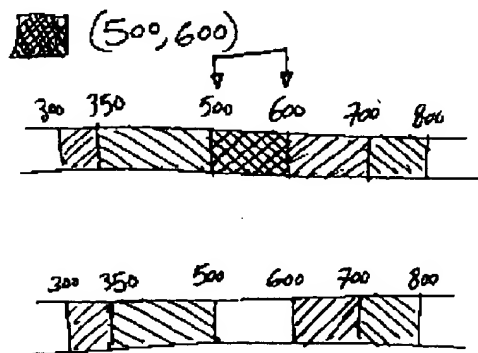



FIGURE 16

FINAL_REMOVE_ATTRVAL_FILL

 $(500, 600) \Rightarrow (550)$

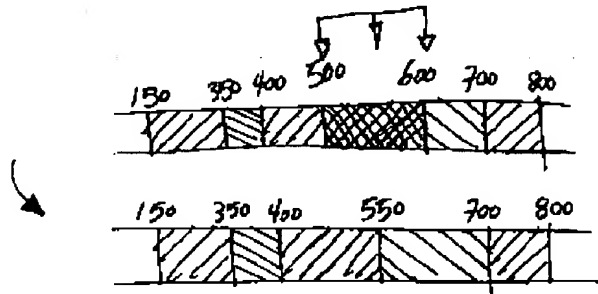


FIGURE 17